

AMENDMENTS TO THE CLAIMS

Please cancel claim 7 without prejudice.

1. (Original) A baseband signal multiplexing circuit for multiplexing a plurality of baseband signals spread with different spread codes into one baseband signal, comprising:

a plurality of baseband filters for respectively limiting bands of the respective baseband signals input thereto;

adding means for adding and code-multiplexing the plurality of baseband signals with the bands limited by said respective baseband filters to produce one baseband signal;

level adjusting means for adjusting an amplitude value of the baseband signal produced by said adding means based on a control signal to output the signal;

D/A converting means for converting the baseband signal which is a digital signal outputted from said level adjusting means into an analog signal; and

gain setting means for calculating a gain set value with which the amplitude value of the baseband signal outputted from said level adjusting means is adjusted to an amplitude value matching a dynamic range of said D/A converting means based on the number of transmission codes which is the number of multiplexed baseband signals, and for notifying said level adjusting means of the gain set value with said control signal.

2. (Original) A baseband signal multiplexing circuit for multiplexing a plurality of baseband signals spread with different spread codes into one baseband signal, comprising:

a plurality of baseband filters for respectively limiting bands of the respective baseband signals input thereto;

a plurality of level adjusting means for respectively adjusting amplitude values of the plurality of baseband signals with the bands limited by said respective baseband filters based on a control signal to output the signals;

adding means for adding and code-multiplexing the plurality of baseband signals outputted from said respective level adjusting means to produce one baseband signal;

D/A converting means for converting the baseband signal which is a digital signal outputted from said adding means into an analog signal; and

gain setting means for calculating a gain set value with which an amplitude value of the baseband signal outputted from said adding means is adjusted to an amplitude value matching a dynamic range of said D/A converting means based on the number of transmission codes which is the number of multiplexed baseband signals, and for notifying said level adjusting means of the gain set value with said control signal.

3. (Previously Presented) A baseband signal multiplexing circuit for multiplexing a plurality of baseband signals spread with different spread codes into one baseband signal, comprising:

a plurality of baseband filters for respectively limiting bands of the respective baseband signals input thereto;

a plurality of level adjusting circuits for respectively adjusting amplitude values of the plurality of baseband signals with the bands limited by said respective baseband filters based on a plurality of control signals to output the signals;

an adding circuit adding and code-multiplexing the plurality of baseband signals outputted from said respective level adjusting circuits to produce one baseband signal;

a D/A converting circuit for converting the baseband signal which is a digital signal outputted from said adding circuit into an analog signal;

a gain setting circuit that:

calculates, for respective said level adjusting circuits, a gain set value with which an amplitude value of the baseband signal outputted from said adding circuit is adjusted to an amplitude value matching a dynamic range of said D/A converting circuit, said gain set value is based on the number of transmission codes, which is the number of multiplexed baseband signals, and said gain set value based on interchannel ratio information, said interchannel ratio information specifying an amplitude ratio of the respective baseband signals when the plurality of baseband signals are multiplexed, and

notifies said level adjusting circuit of the gain set values with said plurality of control signals.

4. (Original) A baseband signal multiplexing circuit for multiplexing a plurality of baseband signals spread with different spread codes into one baseband signal, comprising:

adding means for adding and code-multiplexing the respective baseband signals input thereto to produce one baseband signal;

a baseband filter for limiting a band of the baseband signal produced by said adding means;

a level adjusting means for adjusting an amplitude value of the baseband signal with the band limited by said baseband filter based on a control signal to output the signal;

D/A converting means for converting the baseband signal which is a digital signal outputted from said level adjusting means into an analog signal; and

gain setting means for calculating a gain set value with which the amplitude value of the baseband signal outputted from said level adjusting means is adjusted to an amplitude value matching a dynamic range of said D/A converting means based on the number of transmission codes which is the number of multiplexed baseband signals and, for notifying said level adjusting means of the gain set value with said control signal.

5. (Original) A baseband signal multiplexing circuit for multiplexing a plurality of baseband signals spread with different spread codes into one baseband signal, comprising:

a plurality of baseband filters for respectively limiting bands of the respective baseband signals input thereto;

a plurality of first level adjusting means for respectively adjusting amplitude values of the plurality of baseband signals with the bands limited by said respective baseband filters based on a plurality of first control signals to output the signals;

adding means for adding and code-multiplexing the plurality of baseband signals outputted from said respective first level adjusting means to produce one baseband signal;

second level adjusting means for adjusting an amplitude value of the baseband signal produced by said adding means based on a second control signal to output the signal;

D/A converting means for converting the baseband signal which is a digital signal outputted from said second level adjusting into an analog signal; and

gain setting means for outputting to said respective first level adjusting means the first control signals for adjusting amplitude ratios of the respective baseband signals in accordance with interchannel ratio information for specifying amplitude ratios of the respective baseband signals when the plurality of baseband signals are multiplexed, for calculating a gain set value with which the amplitude value of the baseband signal outputted from said second level adjusting means is adjusted to an amplitude value matching a dynamic range of said D/A converting means based on the number of transmission codes which is the number of multiplexed baseband signals, and for notifying said second level adjusting means of the gain set value with said second control signal.

6. (Original) A baseband signal multiplexing circuit for multiplexing a plurality of baseband signals spread with different spread codes into one baseband signal, comprising:

a plurality of first level adjusting means for respectively adjusting amplitude values of said respective baseband signals input thereto based on a plurality of first control signals;

adding means for adding and code-multiplexing the plurality of baseband signals outputted from said respective first level adjusting means to produce one baseband signal;

a baseband filter for limiting a band of the baseband signal produced by said adding means;

second level adjusting means for adjusting an amplitude value of the baseband signal with the band limited by said baseband filter based on a second control signal to output the signal;

D/A converting means for converting the baseband signal which is a digital signal outputted from said second level adjusting means into an analog signal; and

gain setting means for outputting to said respective first level adjusting means the first control signals for adjusting an amplitude ratio of the respective baseband signals in accordance with interchannel ratio information for specifying an amplitude ratio of the respective baseband signals when the plurality of baseband signals are multiplexed, for calculating a gain set value with which the amplitude value of the baseband signal outputted from said second level adjusting means is adjusted to an amplitude value matching a dynamic range said D/A converting means based on the number of transmission codes which is the number of multiplexed baseband signals, and for notifying said second level adjusting means of the gain set value with said second control signal.

7. (Cancelled).

8. (Previously Presented) A baseband signal multiplexing circuit for multiplexing a plurality of baseband signals spread with different spread codes into one baseband signal, comprising:

a plurality of baseband filters respectively limiting bands of the respective baseband signals input thereto, and adjusting amplitude values of the respective baseband signals based on a control signal to output the signals;

an adder adding and code-multiplexing the plurality of baseband signals with the bands limited by said respective baseband filters to produce one baseband signal;

a D/A converter converting the baseband signal which is a digital signal outputted from said adder into an analog signal; and

a gain setting circuit calculating a gain set value with which an amplitude value of the baseband signal outputted from said adding circuit is adjusted to an amplitude value matching a dynamic range of said D/A converter based on the number of transmission codes which the number of multiplexed baseband signals and said gain setting circuit further notifying a level adjusting circuit of the gain set value with said control signal.

9. (Original) The baseband signal multiplexing circuit according to claim 8, wherein each of said respective baseband filters includes:

a plurality of delay elements connected in series, for delaying input signals by a certain time period to output the signals as tap outputs;

a plurality of coefficient multipliers, for multiplying each of the tap outputs by a filter coefficient of a plurality of preset filter coefficients that is specified by a control signal; and

an adder for adding a plurality of output signals from said respective coefficient multipliers to output the resulting signal.

10. (Original) A method of controlling a transmission level in a baseband signal multiplexing circuit for multiplexing a plurality of baseband signals spread with different spread codes into one baseband signal, said method comprising the steps of:

calculating a gain set value with which an amplitude value of a multiplexed baseband signal matches a dynamic range in D/A conversion based on the number of transmission codes which is the number of multiplexed baseband signals; and

adjusting the amplitude value of the code-multiplexed baseband signal prior to the D/A conversion based on the gain set value.

11. (Original) A method of controlling a transmission level in a baseband signal multiplexing circuit for multiplexing a plurality of baseband signals spread with different spread codes into one baseband signal, said method comprising the steps of:

limiting bands of the respective baseband signals input thereto;

adding and code-multiplexing the plurality of baseband signals with the limited bands to produce one baseband signal;

calculating a gain set value with which an amplitude value of the code-multiplexed baseband signal matches a dynamic range in D/A conversion based on the number of transmission codes which is the number of multiplexed baseband signals;

adjusting the amplitude value of the code-multiplexed baseband signal based on the gain set value; and

D/A converting the baseband signal with the adjusted amplitude value into an analog signal.

12. (Original) A method of controlling a transmission level in a baseband signal multiplexing circuit for multiplexing a plurality of baseband signals spread with different spread codes into one baseband signal, said method comprising the steps of:

limiting bands of the respective baseband signals input thereto;

calculating a gain set value with which amplitude values of the plurality of baseband signals with the limited bands match a dynamic range in D/A conversion based on the number of transmission codes which is the number of multiplexed baseband signals;

adjusting the amplitude values of the plurality of baseband signals with the limited bands based on the gain set value;

adding and code-multiplexing the plurality of baseband signals after the adjustment of the amplitude values to produce one baseband signal; and

D/A converting the baseband signal after the code-multiplexing into an analog signal.

13. (Original) A method of controlling a transmission level in a baseband signal multiplexing circuit for multiplexing a plurality of baseband signals spread with different spread codes into one baseband signal, said method comprising the steps of:

limiting bands of the respective baseband signals input thereto;

calculating, for the respective baseband signals, gain set values with which amplitude values of the plurality of baseband signals with the limited bands match a dynamic range in D/A conversion based on the number of transmission codes which is the number of multiplexed baseband signals;

adjusting the amplitude values of the plurality of baseband signals with the limited bands based on the gain set values;

adding and code-multiplexing the plurality of baseband signals after the adjustment of the amplitude values to produce one baseband signal; and

D/A converting the baseband signal after the code-multiplexing into an analog signal.

14. (Original) A method of controlling a transmission level in a baseband signal multiplexing circuit for multiplexing a plurality of baseband signals spread with different spread codes into one baseband signal, said method comprising the steps of:

adding and code-multiplexing the respective baseband signals input thereto to produce one baseband signal;

limiting a band of the code-multiplexed baseband signal;

calculating a gain set value with which an amplitude value of the baseband signal with the limited band matches a dynamic range in D/A conversion based on the number of transmission codes which is the number of multiplexed baseband signals;

adjusting the amplitude value of the baseband signal with the limited band based on the gain set value; and

D/A converting the baseband signal after the adjustment of the amplitude value into an analog signal.

15. (Previously Presented) A method of controlling a transmission level in a baseband signal multiplexing circuit for multiplexing a plurality of baseband signals spread with different spread codes into one baseband signal, said method comprising:

limiting bands of the respective baseband signals input thereto;

adjusting respective amplitude values of the plurality of baseband signals with the limited bands based on a ratio specifying an amplitude ratio of the respective baseband signals when the plurality of baseband signals are multiplexed;

adding and code-multiplexing the respective baseband signals after the adjustment of the amplitude values to produce one baseband signal;

calculating a gain set value with which an amplitude value of the code-multiplexed baseband signal matches a dynamic range in D/A conversion based on the number of transmission codes which is the number of multiplexed baseband signals;

adjusting the amplitude value of the code-multiplexed baseband signal based on the gain set value; and

D/A converting the baseband signal after the adjustment of the amplitude value based on the gain set value into an analog signal.

16. (Previously Presented) A method of controlling a transmission level in a baseband signal multiplexing circuit for multiplexing a plurality of baseband signals spread with different spread codes into one baseband signal, said method comprising:

adjusting respective amplitude values of the respective baseband signals input thereto based on a ratio specifying an amplitude ratio of the respective baseband signals when the plurality of baseband signals are multiplexed;

adding and code-multiplexing the respective baseband signals after the adjustment of the amplitude values to produce one baseband signal;

limiting a band of the code-multiplexed baseband signal;

calculating a gain set value with which an amplitude value of the baseband signal with limited band matches a dynamic range in D/A conversion based on the number of transmission codes which is the number of multiplexed baseband signals;

adjusting the amplitude value of the baseband signal with the limited band based on the gain set value; and

D/A converting the baseband signal after the adjustment of the amplitude value based on the gain set value into an analog signal.

17. (Original) A method of controlling a transmission level in a baseband signal multiplexing circuit for multiplexing a plurality of baseband signals spread with different spread codes into one baseband signal, said method comprising the steps of:

calculating a gain set value with which amplitude values of the respective baseband signals input thereto match a dynamic range in D/A conversion based on the number of transmission codes which is the number of multiplexed baseband signals;

limiting bands of the input respective baseband signals, and adjusting the amplitude values of the respective baseband signals based on the gain set value by selecting a filter coefficient to be multiplied by each of tap outputs obtained by delaying the input baseband signals by a certain time period;

adding and code-multiplexing the plurality of baseband signals with the limited bands and the adjusted amplitude values to produce one baseband signal; and

converting the code-multiplexed baseband signal which is a digital signal into an analog signal.